

Bethlehem Climate Action Plan: Public Meeting on Draft Plan

December 9, 2020



Agenda

- Introduction
 - *Structure of Climate Action Plan (CAP)*
 - *Process for offering comments*
- Review CAP section by section
 - *Presentation*
 - *Community discussion*
- Stakeholder presentation of select strategies
 - *Stakeholder presentations*
 - *Community discussion*
- Implementation overview
 - *Presentation*
 - *Community discussion and next steps*

En español

Bethlehem wants to hear from all residents.

A Spanish translation of this presentation will be made available afterwards. We welcome input on this through the Submit an Idea form on this website:

www.BethlehemCAP.org

Una traducción al español de esta presentación va a disponible después de la reunión. Damos la bienvenida a la opinión a través del formulario "Enviar una idea" (Submit an Idea) en este sitio web: www.BethlehemCAP.org.

Welcome

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Bethlehem's draft CAP

What it is

- A draft – all strategies and goals are proposed
- Developed with community input
- Case studies and examples still being integrated
- Graphic design not yet included
- Open for public comment through **January 6, 2021**
- Anticipated release in Q1 2021

Contents of CAP

- Introduction
- Executive Summary
- [Plan development process & timeline](#)
- What is a Climate Action Plan?
- [Why Bethlehem needs a Climate Action Plan](#)
- [Vision and principles](#)
- [Relationship to other climate action](#)
- [Greenhouse gas inventory](#)
- [Goals & targets](#)
- Current actions in city
- [Environmental justice and equity](#)
- [Mitigation strategies](#)
- [Adaptation and resilience strategies](#)
- [Implementation Strategy](#)
- Partnerships and commitments
- [Reporting process and accountability](#)
- Next steps

Introduction

CAP sections
CAP strategies
Implementation
Next Steps

Process for offering comments

- Read the draft CAP and submit comments through **January 6**.
- Draft CAP will be uploaded to City website **by end of week**.
- You can get to the CAP webpage via www.BethlehemCAP.org
- A form will be available on the webpage to submit comments

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RETHLEHEM
COMMUNITY

DEPARTMENTS CITY GOVERNMENT ONLINE SERVICES

HOME / PUBLIC WORKS / CLIMATE ACTION PLAN

CLIMATE ACTION PLAN

The City of Bethlehem is committed to fighting global climate change. The City is developing a Climate Action Plan (CAP), which will serve as the City's comprehensive strategy for addressing climate change in Bethlehem and will identify targeted policies, programs, and projects that will both mitigate Bethlehem's contribution to climate change and help the city adapt to the effects of a changing climate. The plan will include actions and goals for both municipal operations and the community as a whole. In this way, City government will continue to lead by example while all Bethlehem residents and businesses will play a role in helping the community prevent and prepare for the effects of climate change.

The plan will be developed with public and stakeholder input throughout 2020, and there will be multiple opportunities to contribute.

MAKE YOUR VOICE HEARD

Public Meetings:

- **Third and Final Virtual Public Planning Meeting: December 9, 2020 - Two sessions at 12:00 PM EST or 5:30 PM EST. [Register here.](#)**
- At the meeting the City and consultant WSP will present a draft of Bethlehem's climate action plan, including its objectives, strategies, and proposed implementation approach. The plan addresses a range of sectors, from



CAP sections

- Development
- Principles
- Climate impacts
- Plan integration
- GHG inventory
- Commitments
- Goals

CAP strategies

Implementation

Next Steps

CAP Development Partners



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General public

CAP sections

- Development
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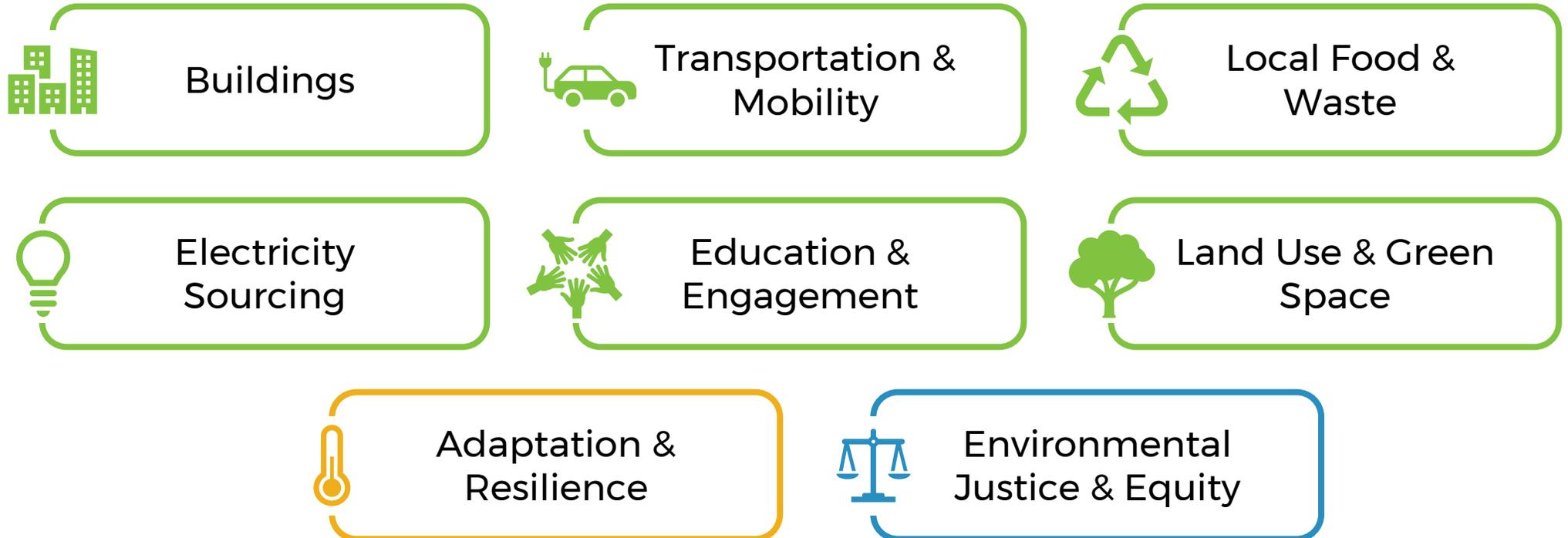
CAP strategies

Implementation

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Stakeholder working groups

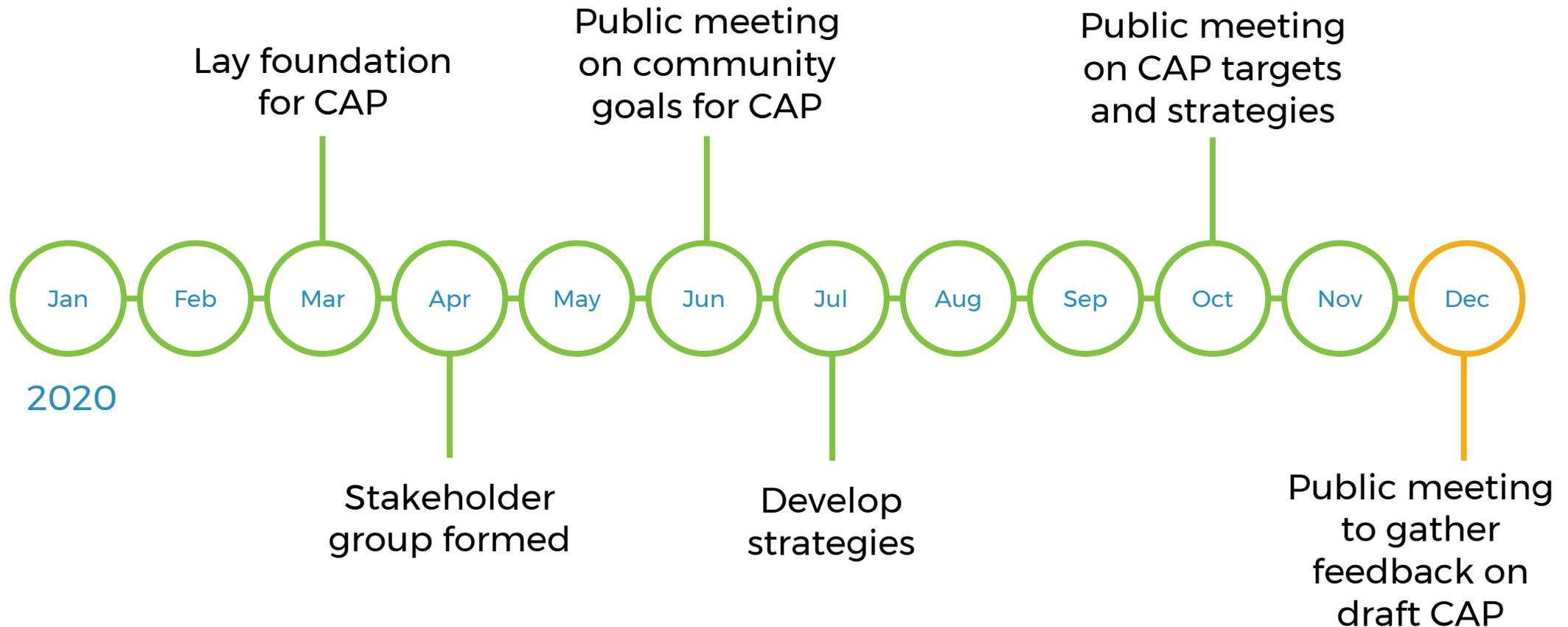
The CAP stakeholder group divided into working groups based on emission-reduction sector (**green**). An Environmental Justice & Equity Steering Committee reviewed all strategies (**blue**). All stakeholders contributed to strategies to boost the city's resiliency and protect at-risk populations (**orange**) .



- Development
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CAP Schedule and Approach

The development of the CAP consists of two phases: (1) laying the foundation, and (2) developing the plan.



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CAP strategies

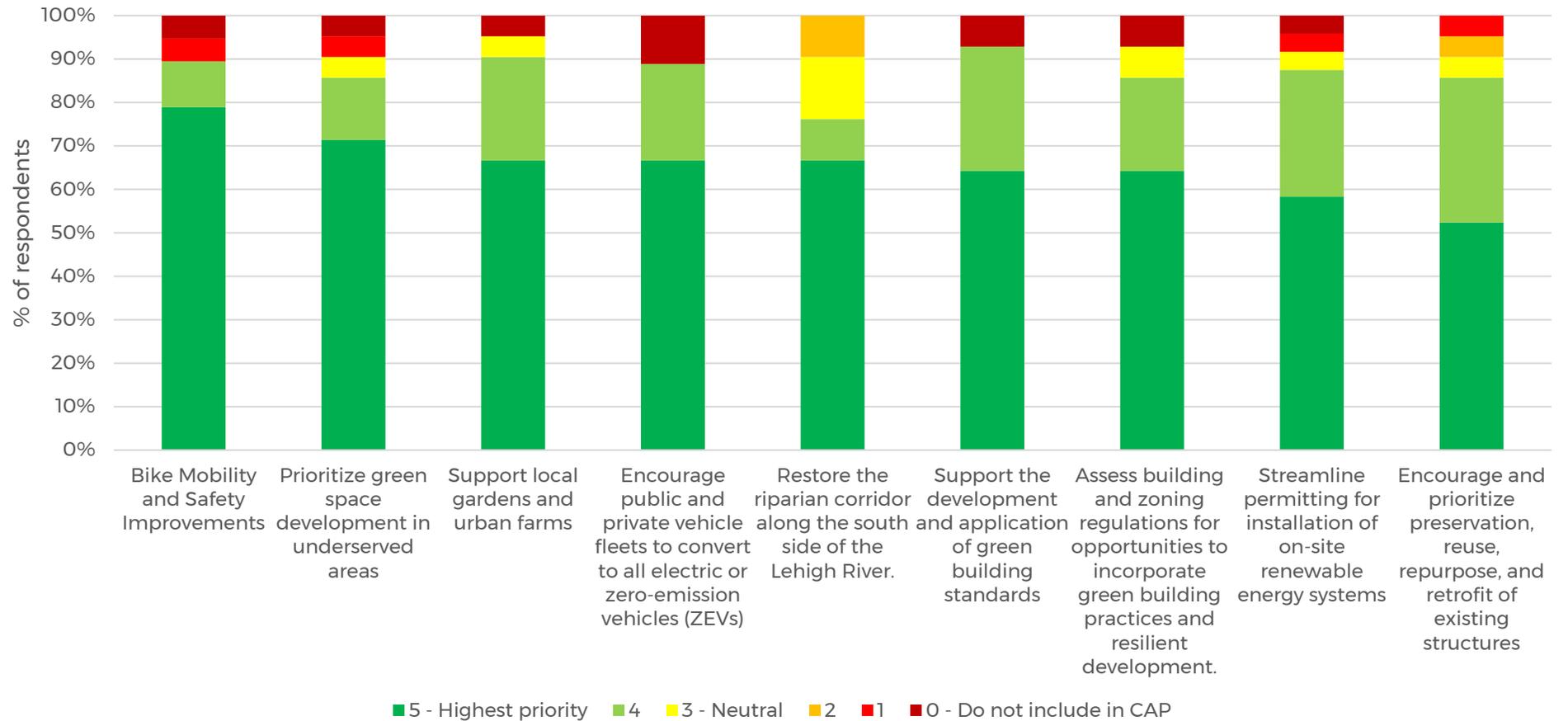
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Feedback from 2nd public meeting

65 community responses to goal and strategy prioritization survey

Highest priority strategies



Introduction

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Feedback from 2nd public meeting

49 hazards identified on Community Hazard Map



49 Comments

We are collecting citizen feedback about where you live and work.

Filter Map Comments ▾

North Side
South Side
West Side

▼ A Comment

- Extreme Heat Lack of Shade Bus Stop
- Extreme Heat Lack of Shade Sidewalks
- Extreme Heat Lack of Shade Park or Public Gathering Point
- Extreme Heat Lack of Air Conditioning Private Residence
- Extreme Heat Lack of Air Conditioning Commercial or other building
- Extreme Heat Lack of nearby cooling source (no pool, public cooling center, etc.)
- Flooding Roadway
- Flooding Buildings Private Residence
- Flooding Buildings Commercial or other building
- Other Hazards

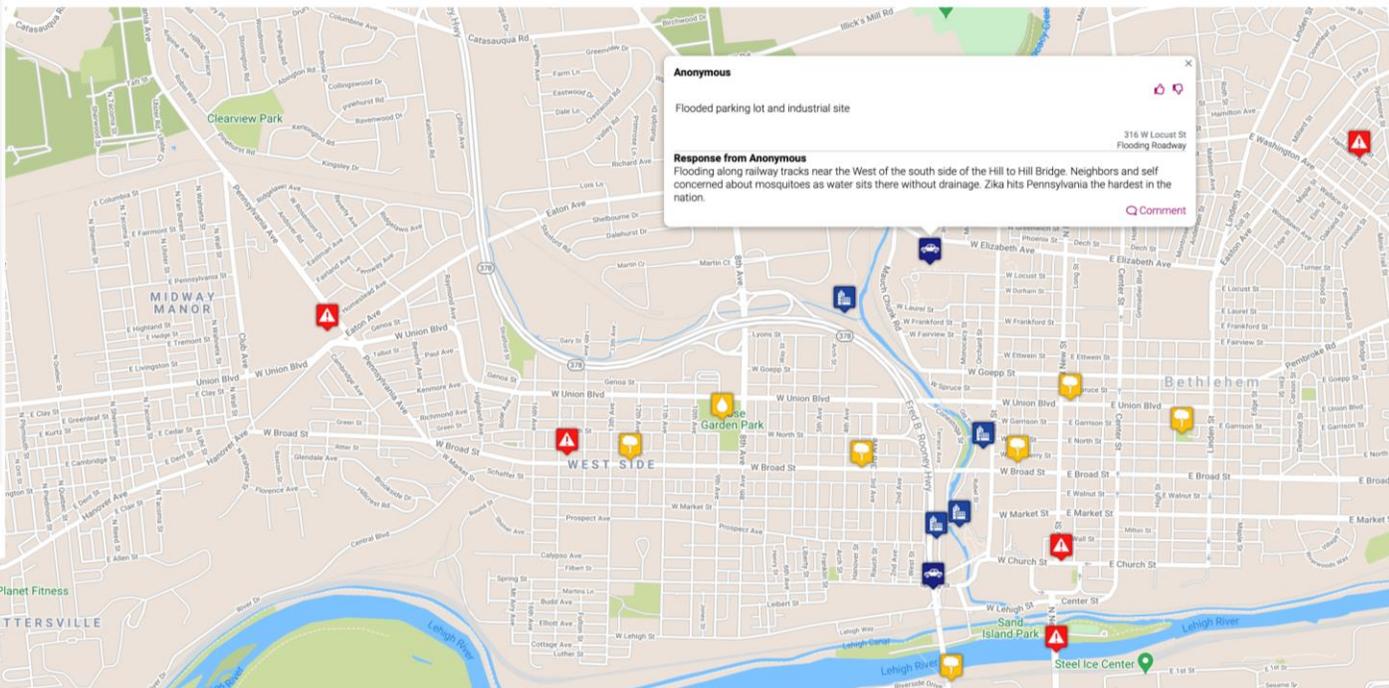
Please use only on-topic comments will not be posted if they are flagrant or contain offensive language.



Mapping your Community Hazards

Extreme Heat: Lack of Shade • Lack of Air Conditioning • Lack of Nearby Cooling Source
Flooding: Roadways • Buildings and Other Hazards

Think about the topics above as they apply to your own neighborhood. We would like you to locate and comment on sites that relate to these topics. You can use the links in the menu to the left to navigate to areas of Bethlehem or zoom in to your neighborhood on the map with the plus and minus icons to the right. Click a location to drop a pin. After you choose a location, a comment box with a drop down menu will let you choose the pin topic and leave a comment. Please use the comment field to describe the site, such as the name of the closest intersection, street, park or landmark. You may also add details on the climate impact, such as the severity of damages from flooding. You are welcome to pin as many sites as you like.



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Vision and Principles

Bethlehem remains vibrant and prosperous as it develops and implements innovative climate action approaches.



Equitable



Healthy



Prosperous



Inclusive



Resilient



Science-based

CAP sections

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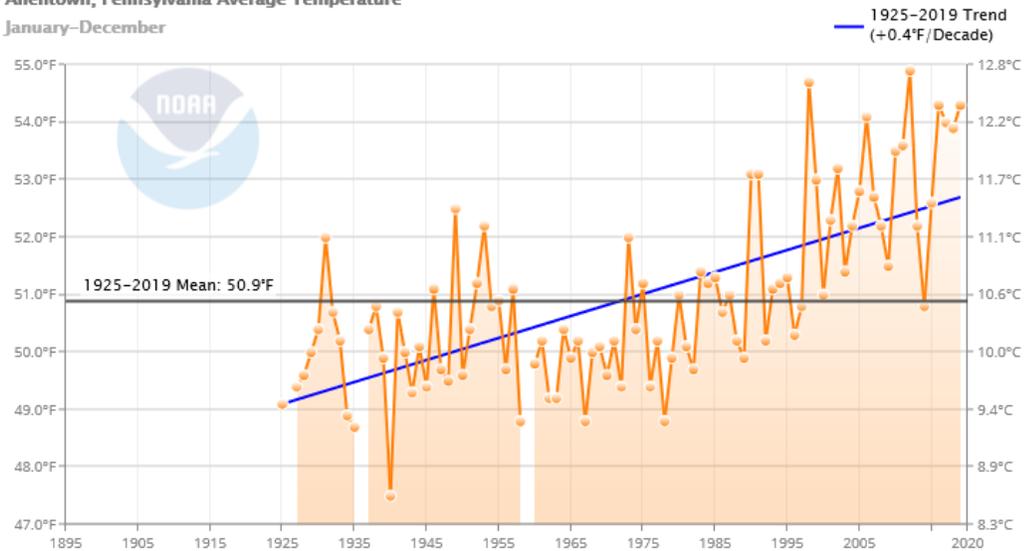
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Bethlehem's climate trends

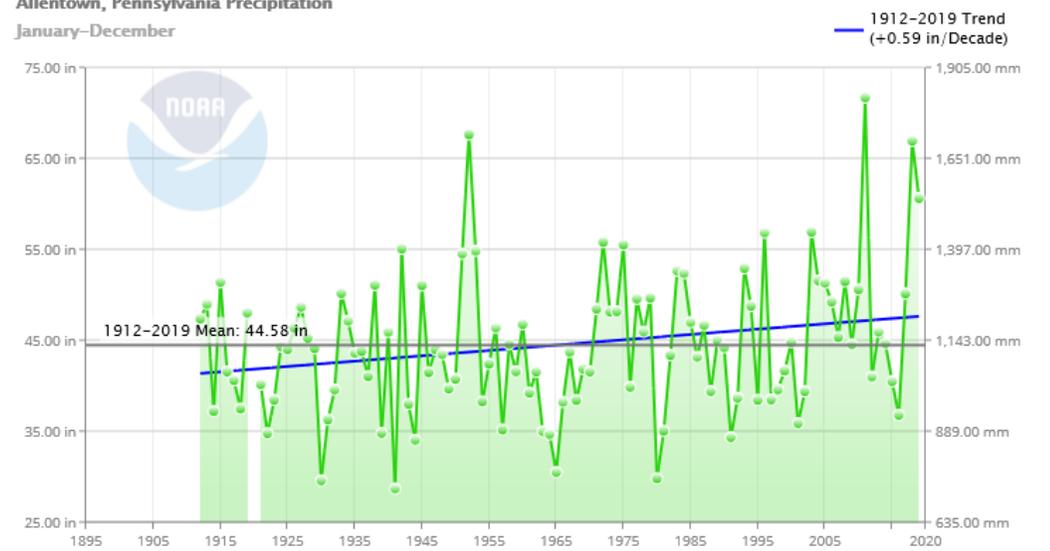
Trends over past 100 years:

- 3.8°F increase in annual temperatures
- 5.86 inches of total annual precipitation

Allentown, Pennsylvania Average Temperature
January–December



Allentown, Pennsylvania Precipitation
January–December



Annual average temperature and precipitation for Allentown, Pennsylvania (NOAA NCDC)

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Projecting Bethlehem's future climate



- By the end of the century, annual temperatures are expected to **increase by 6°F to 9°F**
 - *Annual average temperatures **similar to Richmond, Virginia's** climate from 1971-2000.*



- The number of **days above 90°F** in Bethlehem are expected to increase from the current average of 12 days per year to **36 to 39 days** in the near-term and **50 to 83 days** at the end of the century under the moderate and high future warming scenario, respectively.



- Extreme precipitation will increase
 - *Once-in-50-years precipitation events will be expected to happen every 25 years*
 - *Once-in-100-years precipitation events will be expected to happen every 50 years*
 - *New once-in-100-year events will include **>2 additional inches of precipitation***

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Vulnerabilities

CAP Working Group assessed Bethlehem's vulnerabilities including impacts on vulnerable and general populations and infrastructure in the following sectors: buildings, communications, energy, transportation, stormwater management, wastewater management, and water supply and treatment.

Community risks include (more are listed in the CAP):

- **Increased mortality and medical costs** from heat-related health impacts such as heat stroke, dehydration, cardiovascular, respiratory, and cerebrovascular disease
- **Indirect health impacts** such as less time being active outside due to heat, which contributes to obesity problems
- **Increased costs for road maintenance**, traffic disruptions, and lower quality roadway surfaces as paving materials expand and buckle under extreme heat
- Adverse water quality as extreme heat increases the potential for algal blooms and other **waterborne pathogens in the water system**
- Higher electricity prices and **risk of brownouts/backouts** as extreme temperatures stress electricity supply and production
- Increased costs and **dangerous conditions created by the flooding of roads, buildings, and other infrastructure**
- **Mold and increasing repair costs** for homeowners due to flood damage

CAP sections

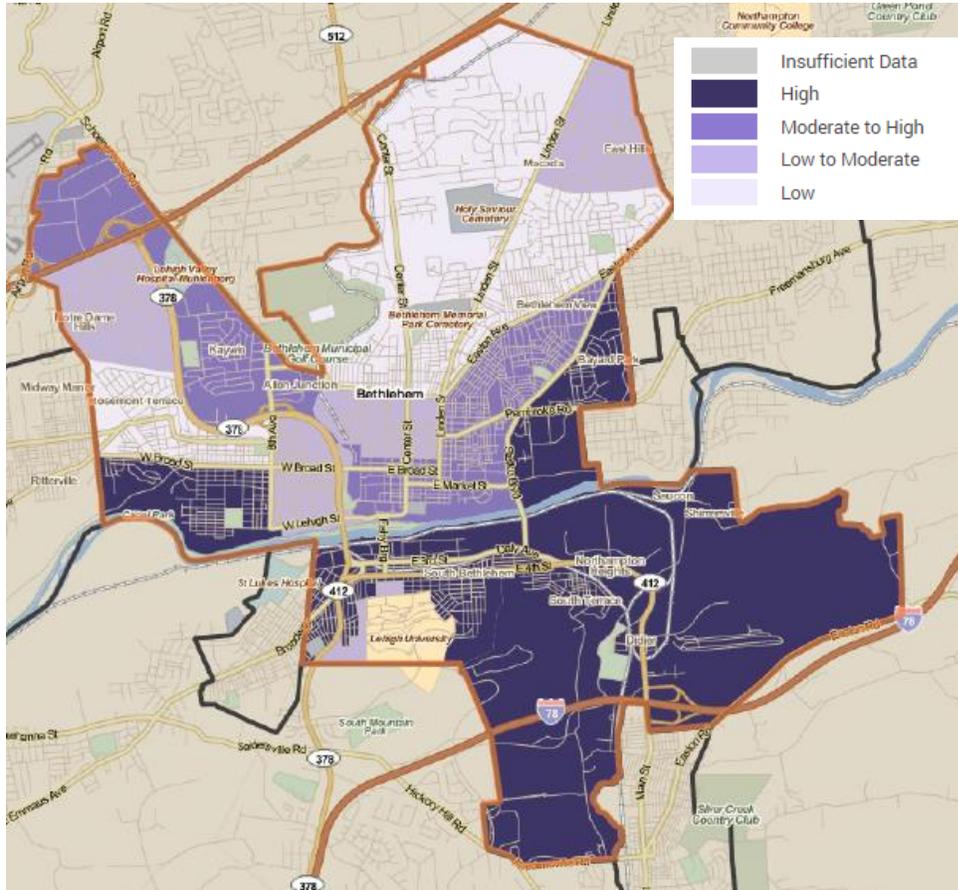
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Disproportionate impacts for frontline communities

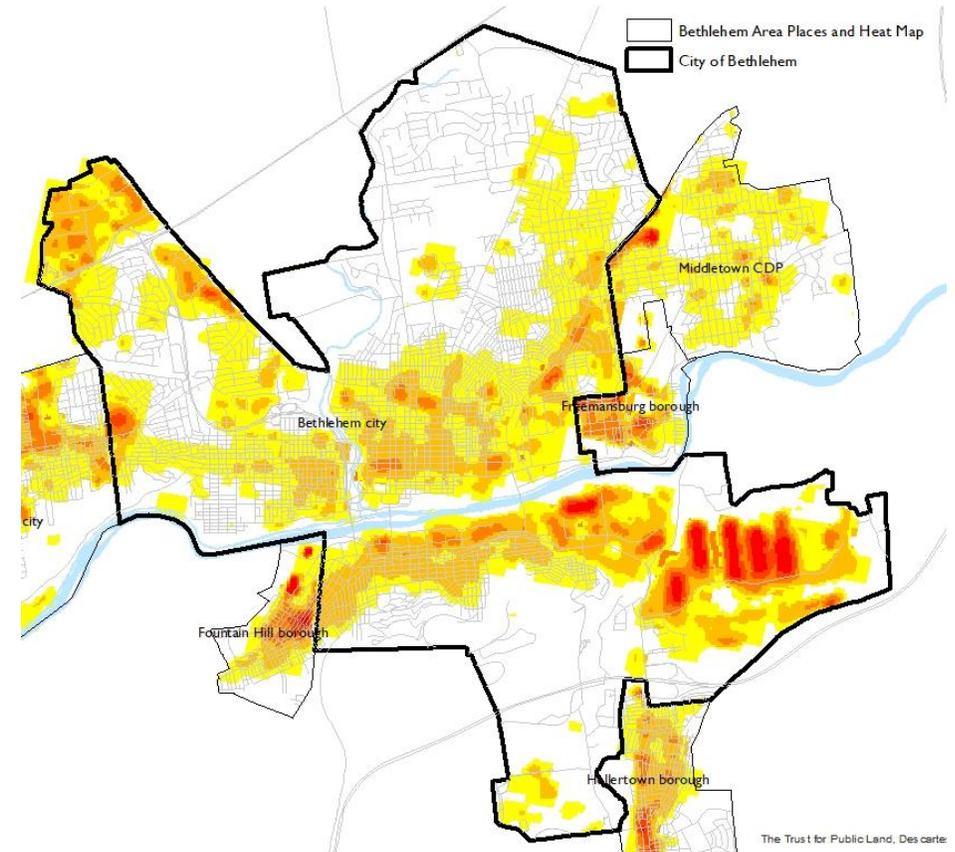
Climate change will exacerbate existing inequities.

Social Vulnerability Index (2018)



PolicyMap.com

Urban heat island severity (2018)



The Trust for Public Land

CAP sections

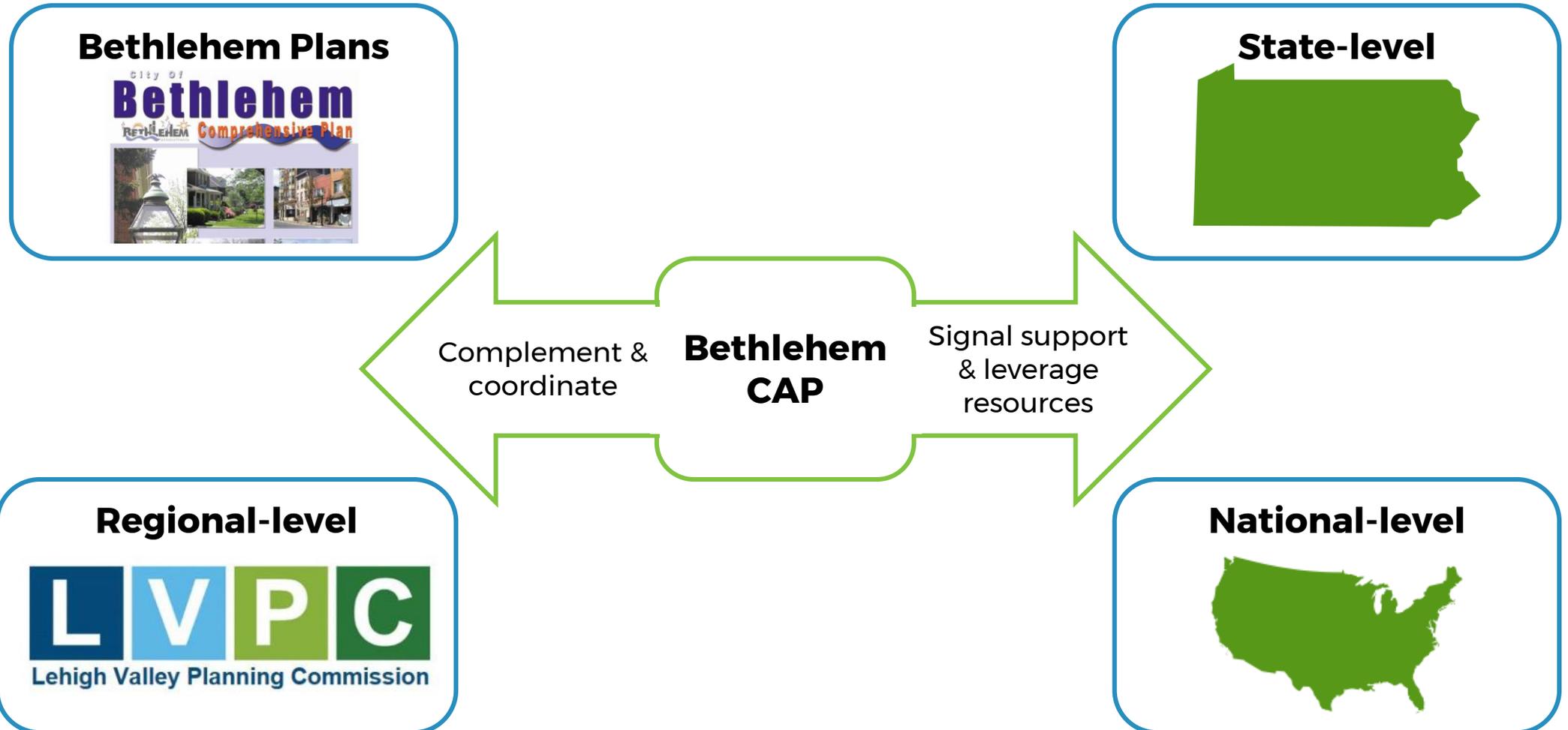
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Integration with other climate actions



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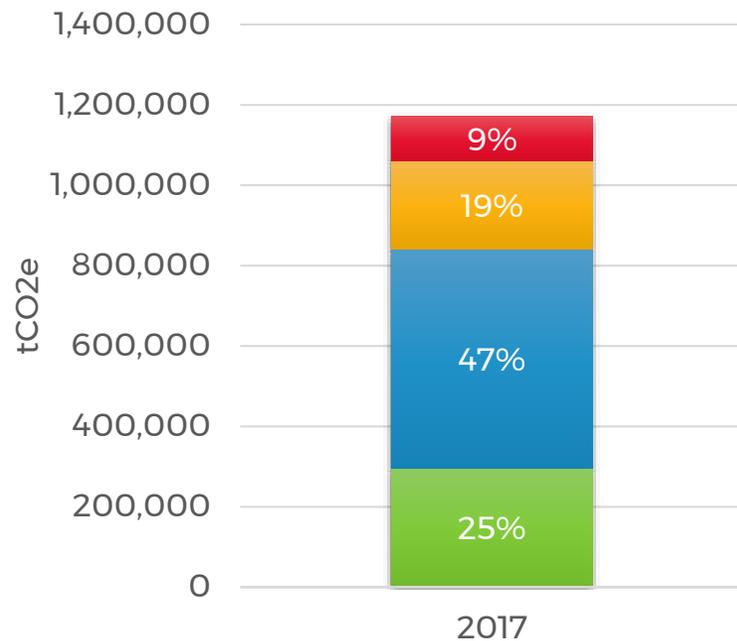
CAP strategies

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Bethlehem Community-wide GHG Inventory

The inventory serves as the baseline for the city’s goals. The inventory will be refined and updated over time to measure progress.



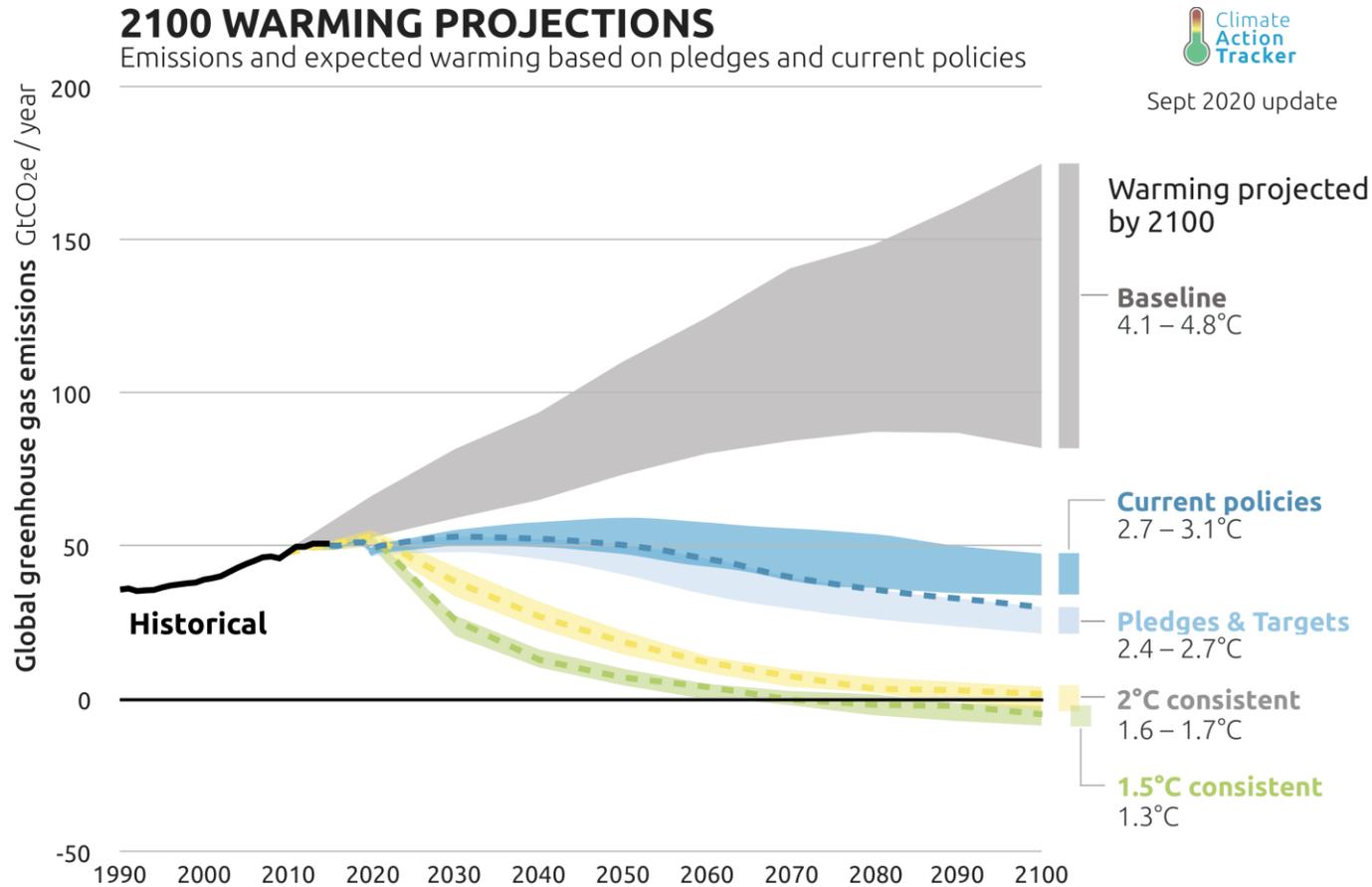
- Waste
- Transportation
- Electricity
- Natural gas and other fuel

Bethlehem 2017 Community-wide GHG Emissions (tCO2e)		
<u>Natural gas and other fuel</u>	Residential	74,000
	Commercial and institutional	86,000
	Manufacturing	136,000
<u>Electricity</u>	Residential	170,000
	Commercial and institutional	249,000
	Manufacturing	126,000
<u>Transportation</u>		219,000
<u>Waste</u>		111,000
Total		1,171,000
Emissions for electricity generation in city limits		2,072,000

**Note: preliminary numbers still undergoing refinement*

The scale of the climate challenge

Bethlehem has previously pledged to uphold the U.S. commitments under the 2015 Paris Climate Agreement



Past Bethlehem commitments



- Development
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Bethlehem's proposed commitments



Community-wide targets

Relative to 2017 GHG baseline:

- 33% reduction by 2025
- 60% reduction by 2030
- Net-zero by 2040



Municipal operations targets

Relative to 2005 GHG baseline:

- 67% reduction by 2025
- Net zero by 2030



Environmental justice

- Establish a just and ethical long-term framework for climate action supporting equity for all Bethlehem residents
- Ensure 40% of overall benefits resulting from City spending on implementing this CAP goes to frontline communities

CAP sections

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• **Goals**

CAP strategies

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Proposed community-wide sector goals



Reduce GHG emissions from buildings by 30% by 2030



Achieve zero waste by 2040



Achieve 100% renewable electricity consumption by 2030



Create a “Bethlehem Climate Challenge” program to empower residents and businesses



Reduce GHG emissions from transportation by a minimum of 30% by 2030



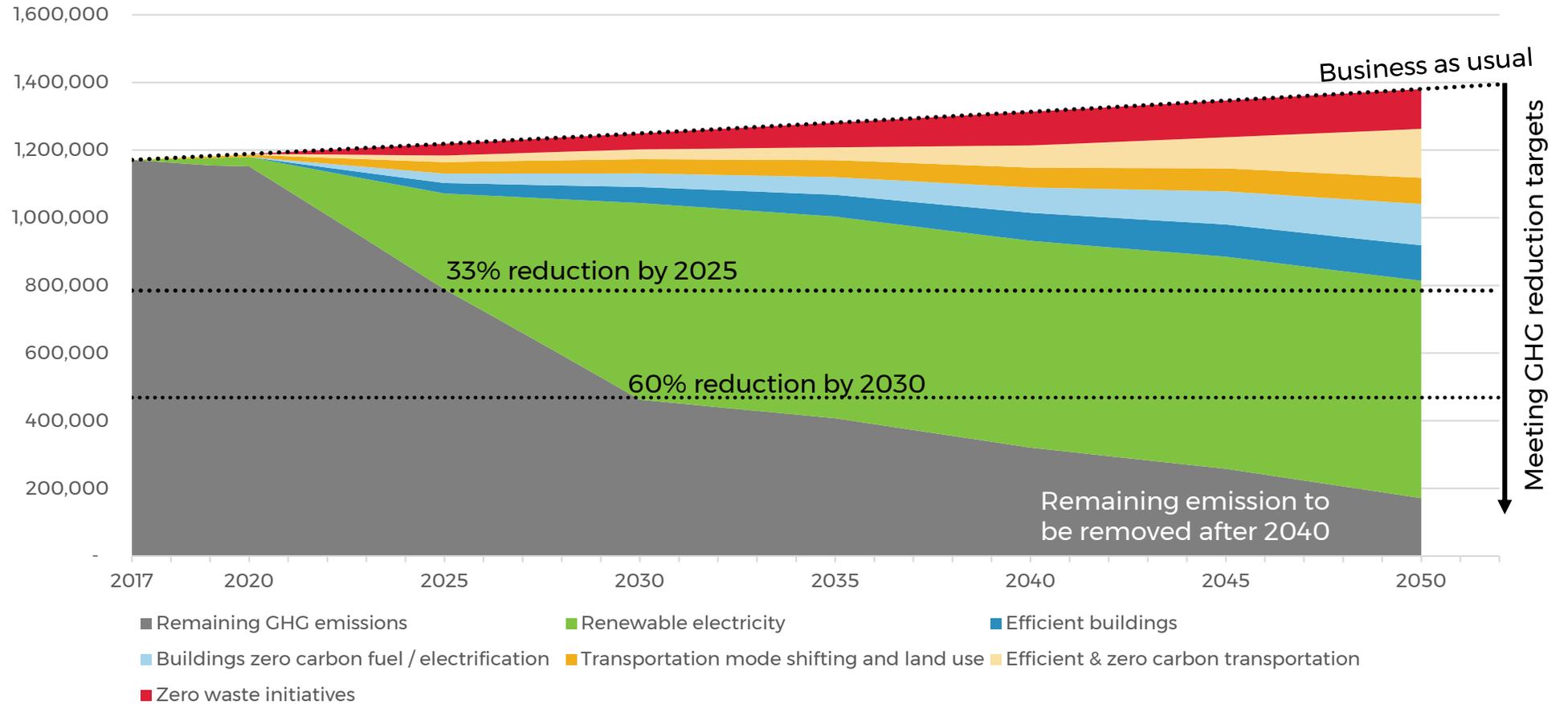
Maximize Bethlehem’s urban green space and tree canopy



Optimize space used for buildings and maximize opportunities for short daily trips / travel mode

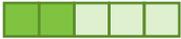
Community-wide achievement pathway

Bethlehem GHG Reduction Strategies



Municipal Operations – example strategy

Speaking: Matthew Dorner, Deputy Director of Public Works/Chief of Engineering

M1.2	Continue to invest in energy efficiency projects to reduce residual emissions and the amount of electricity that must be purchased by the City				
Timeline: Ongoing Community priority: 	GHG emissions impact: 	Co-benefits: <ul style="list-style-type: none"> • Cost savings • Improve air quality • Reduce resource consumption • Increase climate resilience 	City lead: Department of Public Works	Partners: Department of Sustainability	Key Stakeholders: All municipal staff; All residents and businesses
Continue and expand investments in energy efficiency and conservation.					
Environmental justice considerations: The City can lead by example through consideration of environmental justice impacts on all projects.					
Implementation considerations: The Department of Public Works has already completed numerous successful projects, ranging from LED conversions to wastewater treatment plant upgrades. After existing upgrades and the purchase of 100% renewable electricity, the City has a small amount of remaining building-related emissions from natural gas, fuel oil and propane combustion as well as refrigerants.					
Key next step: Department of Public Works to continue to explore opportunities to implement projects reducing residual emissions and operational costs.					

Municipal Operations – example strategy

Speaking: Bethlehem Councilman J. William Reynolds

M1.2	Coordinate working groups of key stakeholders to initiate implementation of each CAP section				
Timeline: Near Community priority: 	GHG emissions impact: 	Co-benefits: <ul style="list-style-type: none"> Improve system sustainability 	City lead: Office of Sustainability	Partners: Department of Public Works; CAP WG; EAC	Key Stakeholders: All municipal staff; All residents and businesses
Form working groups for each section of the CAP consisting of stakeholders from industry, non-profits, government, the general public and vulnerable communities. Many strategies in the CAP will require coordination across these stakeholder groups. The City should take responsibility for this coordination through the Office of Sustainability.					
Environmental justice considerations: The City should actively recruit low-income and frontline communities to participate in these working groups.					
Implementation considerations: The CAP Working Group convened to create this plan provides a starting point for these working groups. The groups can operate as part of the Bethlehem Green Ribbon Commission, as described in the Large Organizations and Institutions section, or independently. The City should leverage the Director of Sustainability position to coordinate working groups.					
Key next step: Pending the creation of a Director of Sustainability, Department of Public Works to hold a meeting with the CAP WG and City Council to discuss how the working group can be expanded and support implementation.					

Environmental Justice & Equity – example strategy

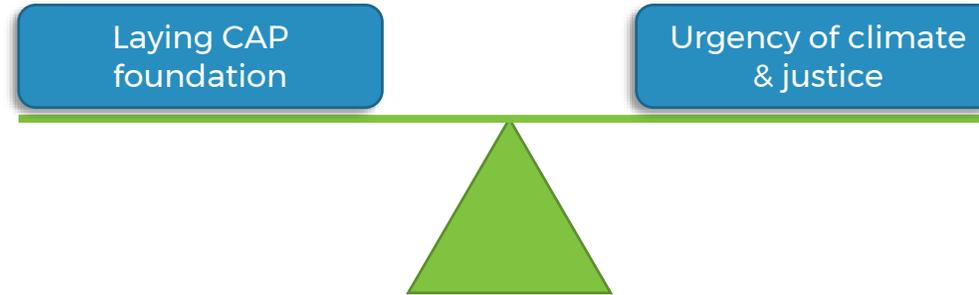
Speaking: Rachel León, NCC Climate Action Network

EJ1.2	Create a Bethlehem Climate and Environmental Justice Council				
Timeline: Near Community priority: 	GHG emissions impact: 	Co-benefits: <ul style="list-style-type: none"> • Reduce inequality and poverty • Improve public health & well-being • Improve air quality • Improve water quality • Increase climate resilience • Improve system sustainability 	City lead: Mayor's Office	Partners: CAP Environmental Justice & Equity Steering Committee; City Council; Mayor's Office; EAC; Community organizations	Key Stakeholders: Frontline communities
<p>To inform the development of a Bethlehem Climate and Environmental Justice Plan, the implementation of strategies in this CAP, and future updates to the Bethlehem CAP, the City should create an Environmental Justice Council. The council could consist of representatives from frontline communities who could gather those communities' concerns and relay them to the city. The council would create an information pathway between city government and community-level concerns about the environment. The council could also develop a framework of principles for advancing equity and justice in Bethlehem.</p>					
<p>Implementation considerations: The Bethlehem CAP's Environmental Justice and Equity Steering Committee and the connections it made in local communities can serve as a starting point until representatives from frontline communities can be selected in a formal process. The Bethlehem Mayor's Office has convened other committees, referred to as the Mayor's Ad Hoc Committees, including the Financial Advisory Committee and the Latino Advisory Committee..</p>					
<p>Key next step: Mayor's Office to convene a meeting with the CAP Environmental Justice and Equity Steering Committee to discuss the creation of a formal Council.</p>					

Stakeholder video presentation of strategies

- Katie Bartolotta, Green Building United
- Lynn Rothman, Bethlehem Environmental Advisory Council (EAC)
- Elisabeth Cichonski , Bethlehem Environmental Advisory Council (EAC)
- Beth Behrend, Bethlehem Environmental Advisory Council (EAC)
- Allison Czapp, Buy Fresh Buy Local Greater Lehigh Valley
- Ben Felzer, Bethlehem Environmental Advisory Council (EAC)
- Mark Stein, Bethlehem Area School District
- Olivia Barz, LANTA

Implementation



Phase 1: 2021-2022

- Establish CAP governance framework and create institutional accountability
- Improve data to track progress
- Build public support for the CAP
- Implement actions to achieve community priorities
- Act quickly to promote equity and justice
- Achieve “no-regrets” quick wins
- Lay the groundwork for bigger policy changes
- Protect the most vulnerable populations and infrastructure

Establishing CAP governance framework

#	Strategy name	2021-2022 goal(s)	Lead
M3.1	Create an Office of Sustainability with a City Director of Sustainability	Establish position and fund in City budget	City Council with Mayor's Office
M3.4	Coordinate working groups of key stakeholders to initiate implementation of each CAP section	Formalize working groups and lead implementation of other Phase 1 strategies	Dept. of Public Works handing off to Office of Sustainability
M3.5	Ensure local legal framework is in place to implement CAP strategies	Pass a "Right to a Healthy Climate" ordinance or similar legislation to facilitate passing codes stricter than state standards	City Council
E1.4	Consolidate public outreach and education responsibilities within City government	Define City position responsible for coordinating sustainability education and outreach	Mayor's Office

Reporting process and accountability

Robust monitoring and public reporting on implementation progress will allow the city to report progress toward GHG emissions reduction targets and mitigate climate risk to its residents, business, and institutions

Proposed Office of Sustainability would take responsibility for monitoring and public reporting on the CAP's implementation:

- *Update community-wide GHG inventory biennially*
- *As needed, amend or augment strategies and goals to ensure targets are on track*
- *Draft metrics to track progress on each of the CAP's actions*
- *Report progress toward each strategy on City website*

Discussion



How to stay engaged

Visit BethlehemCAP.org for updates and details:

- Download the draft CAP (available by end of week)
- Submit public comments on the draft by January 6
- Submit an idea or ask questions via online form

Get further involved:

- Follow the City of Bethlehem and Nurture Nature Center on social media for updates and ways to contribute
- Talk with your friends, family and neighbors – educate them about climate change and Bethlehem’s CAP
- Discover ways you can make a difference as an individual – explore ways to save money and make your home more energy efficient, for instance
- You know your community best – be informed and speak up about your concerns and ideas!

Thank you!



City of
BETHLEHEM PA
CLIMATE ACTION PLAN